

# EXHIBIT D

ARTICLES DISCUSSING ABUSE OF  
WELLBUTRIN AND SEROQUEL

EXHIBIT D

## Psychotropic medication abuse by inmates in correctional facilities

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### ABSTRACT

I noted an alarming surge in the prescribing of quetiapine (Seroquel) in our County correctional facility, Santa Rita Jail, approximately five years ago. The number of quetiapine tablets dispensed surpassed all other antipsychotic medications combined, in the observed three-month period. This sudden four-fold increase in prescribing to inmates by our psychiatrists was extremely unusual and warranted further investigation.

### KEYWORDS

Psychotropic, medications, drugs, correctional facility, inmates, prison, jail, abuse

Correctional settings have a convergence of factors that may predispose inmates in this setting to the abuse of available medications. As state hospitals have all but disappeared, a greater proportion of the chronically mentally ill now reside in our correctional facilities. This is often due to such laws as "Three strikes," currently enacted in 24 states, and decreased funding for mental health services nationwide. As many as 20% of the 2.1 million Americans in county jails and state prisons are seriously mentally ill, far outnumbering the 80,000 who are in mental hospitals. A study by the Human Rights Watch concludes that these facilities "have become the nation's default mental health system" with the level of patient acuity growing more severe over the past few years.<sup>1</sup>

Although the number of inmates with psychiatric disabilities has been growing for the past decade, the available mental health services in these facilities have been slow to meet that need. Services are stretched and psychiatrists are overwhelmed by the sheer number of inmates requiring assessments and services. Often, an accurate psychiatric diagnosis may be complicated by personality disorders and malingered psychotic symptoms, which are left mainly unresolved.

In addition to both personality disorders and malingering, the high prevalence of substance abuse within this population complicates diagnosis. A recent study documented a lifetime prevalence of substance abuse disorders in 74% and alcohol use disorder in 72% of the mentally ill offenders.<sup>2</sup> Furthermore, 51% had a documented personality disorder. Ultimately, only 25% of the subjects had *neither* a substance abuse disorder nor personality disorder.

Although misuse of anticholinergic agents (e.g. benztropine, trihexyphenidyl) by the seriously mentally ill has been long documented, until recently, the literature has been sparse regarding the abuse of other psychotropic medications in correctional settings.<sup>3</sup> Luckily, some published case reports have begun to appear. Reccoppa et al. provided case reports of gabapentin (Neurontin) pulverized and intranasally snorted by inmates with a prior history of cocaine dependence in the Florida State Department of Corrections.<sup>4</sup> These inmates described obtaining an altered mental state or high from snorting the gabapentin powder. This discovery eventually led to the removal of gabapentin from the formulary at these facilities.

Pierre et al. described widespread "abuse" of quetiapine (Seroquel) among inmates in the Los Angeles County Jail.<sup>5</sup> In addition to oral administration, it was snorted in its pulverized powder form, and used intravenously for its potent sedative and anxiolytic properties. The authors concluded "while antipsychotic medications are not typically recognized as drugs with abuse potential, the use of intranasal quetiapine suggests otherwise, and underscores the importance of recognizing malingered psychosis in clinical settings."

In correctional facilities across the U.S., inmates refer to quetiapine as "quell", "Susie Q" or "baby heroin".<sup>6,7</sup> Hanley et al. describes the unforeseen use of antipsychotics as drugs of abuse by the correctional population through case reports. Furthermore, the literature documents inmates engaging in drug seeking and illegal behaviors to obtain quetiapine, even vowing threats of suicide when presented with its discontinuation.<sup>8</sup> These factors led one set of authors to

recommend that clinicians be extremely cautious when prescribing quetiapine for non-serious mental disorders (e.g. sleep and anxiety), and in all individuals with a history of substance abuse.<sup>9</sup>

In conversations with medical peers across the US, it was noted that psychotropic medication abuse has a widespread impact on inmate safety as well as larger economic repercussions. In addition to quetiapine, medications repeatedly named as carrying abuse potential include olanzapine (Zyprexa), gabapentin, trihexyphenidyl (Artane), buspirone (Buspar), bupropion SR (Wellbutrin SR), and the tricyclic antidepressants (amitriptyline, nortriptyline, desipramine etc.). These drugs are abused for their sedative properties, mind altering effects or for the potential to get a high. Reportedly, only the sustained release (SR) form of bupropion was crushed and snorted, most often as an adjuvant to gabapentin abuse. In addition to their sedative properties, tricyclic antidepressants (TCAs) are lethal when hoarded and taken as an overdose. In our facility we had one such case of suspected suicide, which alerted us to the need for a harm reduction model.

Since that initial observation, the widespread abuse of psychotropic medications has been reported throughout city, county, state and federal correctional facilities. It also became evident that a multitude of factors keep most facilities from restricting these abused medications: inmate grievances, ignorance on the practitioner's part, and until recently, the lack of any published information. One milestone in this area was the February 2008 memo from the California Department of Corrections and Rehabilitation, which changed quetiapine to non-formulary status due to abuse and misuse. Furthermore, criteria for its prescribing were established, effectively curtailing its prescribing.

In our Santa Rita facility, we also set about reversing this trend. A criminal justice-specific *Therapeutics & Medication Use Committee* was established, and began meeting every six weeks. A frank discussion with our MDs revealed that they were well aware of the burgeoning abuse problem: each had stories revealing inmate malingering and sociopathy. In addition, they described the targeting of chronically mentally ill inmates by other inmates based upon their prescribed psychotropic medication regimens. These inmates would be preyed upon, and their medications taken from them, resulting in wide-spread abuse and medication non-compliance.

Psychotropic medication abuse was presented, case studies reviewed and specific issues addressed at these meetings. In a two-part process, five drugs or drug classes of medications were removed from the jail formulary:

quetiapine, gabapentin, bupropion SR, trihexyphenidyl and the TCAs. Furthermore, a clinical pharmacist was hired to both support and review medication prescribing using newly established psychotropic medication guidelines specifically in the county jail. As a result, medication abuse case reports, usage and costs dropped significantly within a 3-month period. Monthly monitoring, education and interventions have kept prescribing of these medications to inmates by our psychiatrists extremely low.

Interviews with correctional facilities nationally revealed psychoactive medications commonly bartered and abused in the jail setting. Through education and formulary changes, a harm reduction model was successfully implemented at Santa Rita Jail. Educational efforts using a clinical pharmacist and correctional psychotropic medication guidelines (e.g. restricted formulary status, detailed diagnostic criteria), directed at medical staff, can reduce the abuse potential of psychoactive medications in the correctional setting.

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# The Interface



## Is Seroquel Developing an Illicit Reputation for Misuse/Abuse?

by Randy A. Sansone, MD, and Lori A. Sansone, MD

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This ongoing column is dedicated to the challenging clinical interface between psychiatry and primary care—two fields that are inexorably linked.

### ABSTRACT

Quetiapine, an atypical antipsychotic, has been the subject of a series of case reports that suggest a potential for misuse/abuse. The available cases indicate a male predominance; oral, intranasal, or intravenous routes of administration;

misuse/abuse in jail or inpatient psychiatric settings; and subjects with extensive histories of polysubstance abuse. While possible pharmacological explanations have been proffered, compared to the other atypical antipsychotics, there is no clear explanation for an alleged higher risk

of misuse/abuse with quetiapine. Likewise, there are no available animal or human empirical studies to evaluate risk. At this juncture, clinicians in psychiatric and primary care settings can only remain alert to a potential risk, particularly in patients who meet the current demographic profile.

### KEY WORDS

Quetiapine, abuse, misuse

### INTRODUCTION

In this edition of *The Interface*, we examine the potential risk for misuse/abuse that has been inferred with the atypical antipsychotic quetiapine (Seroquel,<sup>™</sup> Wilmington, Delaware). Quetiapine entered the market in 1997, and in 2008 generated sales of 4.5 billion dollars.<sup>1</sup> The drug has had a complicated pharmaceutical history, including concerns about the manufacturer allegedly not disclosing metabolic side effects and the United States Food and Drug Administration's (FDA) confrontation about off-label marketing.<sup>2</sup> Over the past several years, quetiapine has also been associated with case reports of patient misuse and abuse. In this edition of *The Interface*, we review the available evidence for misuse/abuse, examine potential pharmacological explanations, and discuss caveats.

### QUETIAPINE: A BRIEF PHARMACOLOGICAL DESCRIPTION

Quetiapine is a dibenzodiazepine atypical antipsychotic drug that is structurally similar to clozapine.<sup>3</sup> In terms of its receptor effects, quetiapine is a potent serotonin 5-HT<sub>2A</sub>-receptor antagonist and a moderate dopamine D<sub>2</sub>-receptor antagonist.<sup>3</sup> The drug also antagonizes serotonin 5-HT<sub>1A</sub>, dopamine D<sub>1</sub>, histamine H<sub>1</sub>, and adrenergic α<sub>1/2</sub> receptors, but has no meaningful activity at cholinergic, muscarinic, or benzodiazepine receptors.<sup>3</sup> The mean half-life of quetiapine is approximately



## [ t h e i n t e r f a c e ]

six hours.<sup>3</sup> At this juncture, quetiapine has been approved by the FDA for the treatment of schizophrenia and manic and depressive episodes as well as maintenance therapy in bipolar disorder.

### A DRUG OF MISUSE/ABUSE?

In assessing the evidence for quetiapine as a drug of misuse/abuse, we will present available case reports, published clinician impressions, the findings of cursory literature searches, and the emerging street character of quetiapine.

**Available case reports.** While presently designated as a non-controlled substance, there have been a series of case reports indicting quetiapine as a potential substance of misuse/abuse. These case reports are summarized in Table 1.<sup>4-10</sup> Note that the majority has involved younger male subjects and that the entire cohort is riddled with past substance abuse, particularly the abuse of benzodiazepines. The routes of misuse/abuse have included oral, intranasal, and intravenous entries, with the latter two methods mediated by crushing tablets. While not noted in the table, the majority of reported subjects were either incarcerated or psychiatric inpatients.

#### Published clinician impressions.

In addition to the preceding case reports, there are a number of relevant professional commentaries in the published literature. For example, Hussain et al<sup>10</sup> state that, "...the [therapeutic] use of quetiapine [evolving] to its abuse either intranasally or intravenously is more prevalent than is currently assumed." Murphy et al<sup>6</sup> opine that, "...if the current misuse of the compound continues...then the abuse 'signal' will predictably become more evident..."<sup>16</sup> Pinta and Taylor<sup>7</sup> comment that, "We have not seen similar drug-seeking behavior with other second-generation antipsychotics..." with an emphasis

**TABLE 1.** Summary of case reports of quetiapine abuse

FIRST AUTHOR (COUNTRY, YEAR)	PATIENT DEMOGRAPHICS	DESCRIPTION OF QUETIAPINE ABUSE	OTHER RELEVANT DETAILS
Paparrigopoulos <sup>7</sup> (Greece, 2008)	48-year-old man	1000mg /day orally	Alcohol/benzodiazepine dependence
Murphy <sup>6</sup> (US, 2008)	29-year-old man	Unknown amount, orally	Feigned psychotic symptoms
Reeves <sup>4</sup> (US, 2007)	49-year-old man 23-year-old man 39-year-old man	800mg/day orally 2400mg/day, orally 800mg/day, orally	Alcohol/benzodiazepine abuse Benzodiazepine dependence Exaggerated bipolar symptoms
Pinta <sup>7</sup> (US, 2007)	39-year-old man	600mg/day, orally	Opiate abuse; demanded treatment with quetiapine
Morin <sup>6</sup> (US, 2007)	28-year-old woman	Unknown amount, intranasally	Polysubstance abuse
Waters <sup>7</sup> (US, 2007)	33-year-old man	400-800mg, intravenously	Polysubstance dependence including benzodiazepines
Hussain <sup>8</sup> (Canada, 2005)	34-year-old woman	600 mg, intravenously	Polysubstance abuse, borderline personality disorder

that one of the authors has worked in the penal system for 35 years. Pierre et al<sup>11</sup> express their concern about the "widespread abuse" of quetiapine in the Los Angeles County Jail and disclose that, "...quetiapine is associated with a better subjective response than its conventional antipsychotic counterparts."<sup>11</sup> Keltner and Vance<sup>12</sup> state that, "...resourceful personalities have exploited the effects of quetiapine for its mind-altering effects," referring to the drug's abuse in prison populations. Finally, Hanley and Kenna<sup>13</sup> emphasize that, "Clinicians must be cognizant of the potential for quetiapine...as a drug of abuse."

#### Cursory literature search.

Through a cursory search on the PsycINFO database, we entered the term *illicit use* with each atypical

antipsychotic; only quetiapine yielded results in this literature. Likewise, we entered the term *abuse* with each atypical antipsychotic and, again, only quetiapine yielded findings.

#### Street names and street value.

One final bit of substantiation of the veracity of quetiapine misuse/abuse relates to the various street monikers that have emerged as well as the assigned monetary street value. According to the published literature, street names for quetiapine include "quell,"<sup>17,9,11,12</sup> "Susie-Q,"<sup>17,12</sup> "baby heroin,"<sup>10,12</sup> and "Q-ball."<sup>10,14</sup> The last designation refers to the combination of quetiapine with another substance, such as heroin or cocaine. While not an official indictment of quetiapine, the development of street terms for any drug suggests some potential illicit value in this setting.

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As for its explicit street value, Tarasoff and Osti<sup>15</sup> explored the cost of illicit quetiapine by soliciting the price of the drug from 61 buyers and sellers in Las Vegas, Nevada. A single-dose price for quetiapine 25mg was between \$3 and \$8. On a side note, olanzapine was the only other atypical antipsychotic that emerged in this study as a drug with street value.

### POSTULATED MECHANISMS EXPLAINING MISUSE/ABUSE

#### The dopamine reward system.

According to Tcheremissine,<sup>16</sup> the contemporary theory of addiction posits that all addictive drugs share a common neurotransmitter explanation, which purportedly entails the dopamine system in the mesolimbic tract (i.e., the “mesolimbic reward system”). However, Tcheremissine adroitly points out that while the communal-pathway theory is appealing, this view is too “compartmentalized.” Given this theory, how does quetiapine position with regard to dopamine influences when compared with the other atypical antipsychotics?

According to a summary of receptor potencies printed in the *Canadian Medical Association Journal*<sup>17</sup> and Horacek et al.,<sup>18</sup> the potency of quetiapine at the D2 receptor site is relatively lower than most, if not all, of the remaining atypical antipsychotics. However, the overall effect is a decrease in dopamine. These data do not entirely exclude a dopamine-related explanation, but one would wonder why the other atypical antipsychotics are not at least equally subject to misuse/abuse.

#### The sedation/anxiolytic theory.

Some authors suggest that the abuse potential of quetiapine may be mediated through its sedative/anxiolytic properties and therefore related to H1 and  $\alpha$ 1-adrenergic receptor antagonism.<sup>4,6</sup> However, existing data cast doubt on

this hypothesis, as well. For example, quetiapine is less sedating than olanzapine<sup>19</sup> and comparable to clozapine.<sup>20</sup> Neither of these latter two atypical antipsychotics seem to be under scrutiny for misuse/abuse. In support of these reservations, Twaites et al.<sup>21</sup> examined 1,728 patients on quetiapine; drowsiness and sedation were reported by only three percent of the entire cohort. Likewise, in a retrospective analysis of the quetiapine safety database (77 studies, 7894 patients), only 26 percent of participants reported somnolence at least once during quetiapine therapy.<sup>22</sup>

Finally, while abuse has been frequently associated with those who abuse or are dependent on benzodiazepines, quetiapine has no meaningful activity at benzodiazepine receptors.

**A cautionary note.** The seeming paucity of evidence for either of the preceding postulated theories does not exclude some unique intrinsic property of the compound that offers an appealing internal experience for users. Nor does this impression exclude the potential for quetiapine to be subject to abuse because of some unknown pharmacological effect (e.g., an anticholinergic effect) and/or unexpected additive effect with common substances of abuse. These possibilities warrant further research.

**Caveats.** To date, reports of quetiapine misuse/abuse have largely emerged from prison and inpatient psychiatric settings—unique settings that potentially limit the generalization of findings to more normative populations. In addition, most have occurred in individuals with extensive histories of substance abuse, particularly benzodiazepines, suggesting a likely risk factor for prescription. Indeed, in some cases, quetiapine appears to have been used in combination with an illicit drug to heighten a subjective effect—again, denoting a specific at-risk population.

Finally, as Tcheremissine<sup>16</sup> rationally points out, there are no corroborating animal or human studies to either scientifically confirm or refute the risk of quetiapine misuse/abuse.

To complicate matters, quetiapine is being actively explored as a treatment for substance abuse. For example, quetiapine has been studied in cocaine dependence,<sup>23</sup> alcohol abuse,<sup>24,25</sup> polysubstance abuse,<sup>26,27</sup> cannabis use,<sup>28</sup> and opioid addiction,<sup>29</sup> and several studies have denoted its usefulness in dual-diagnosed patients. Curiously, the drug accused of misuse/abuse may be a treatment for those who misuse and abuse various substances.

### CONCLUSIONS

Quetiapine has been described in a number of case reports as a drug of potential misuse/abuse. At the present time, all cases have emerged from institutional settings, either prisons or inpatient psychiatric facilities. However, quetiapine has a number of street names and an assigned street value, which suggests that misuse/abuse may extend beyond the settings described in available case reports. The pharmacological theories to explain risk remain unsubstantiated, and there are no available animal or human empirical studies to clarify the potential risk. At this juncture, clinicians in psychiatric and primary care settings can only be alert to the potential for quetiapine to be misused/abused, particularly in patients with histories of polysubstance and/or benzodiazepine abuse and in those patients who unfoundedly pressure the clinician for the drug.

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FIVE THINGS TO KNOW ABOUT ...

## Bupropion abuse and overdose

Nathan Stall MD, Jesse Godwin MD, David Juurlink MD PhD

**Bupropion is a commonly used antidepressant and smoking cessation aid**

Bupropion is used widely as a smoking cessation aid and antidepressant and is available in immediate- and extended-release preparations. It blocks neuronal reuptake of dopamine and norepinephrine and antagonizes acetylcholine at neuronal nicotinic receptors.<sup>1</sup> At therapeutic doses, bupropion is generally well-tolerated; however, common adverse effects include dry mouth, nausea, agitation and insomnia.<sup>1</sup>

### Clinicians should remain vigilant for signs of bupropion misuse

Bupropion abusers report that they easily obtained the drug from physicians under the pretense of seeking an antidepressant or smoking cessation aid.<sup>2</sup> Emerging reports also highlight bupropion misuse in correctional facilities.<sup>3</sup> Bupropion toxicity should be considered in patients presenting with new-onset seizures of unknown cause, particularly in the context of suspected substance abuse. Nonhealing skin ulcers may reflect surreptitious injection of crushed tablets.

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### Bupropion abuse is a growing public health problem

Although bupropion shares some structural and pharmacologic properties with amphetamine, early research suggested the drug did not produce any psycho-stimulant effects.<sup>1</sup> However, clinical experience and an increasing number of case reports describe bupropion abuse,<sup>2</sup> including recreational ingestion, nasal insufflation of crushed tablets and, more recently, intravenous injection.<sup>3</sup> Bupropion abusers report receiving a "high" similar to cocaine abuse, but of lesser intensity.<sup>4</sup>

### Seizures are a hallmark of toxicity

Bupropion lowers the seizure threshold, even at therapeutic doses of 150–450 mg/d.<sup>1</sup> Acute overdose typically produces seizures within a few hours after ingestion, although seizure onset may be delayed up to 24 hours in patients who ingest extended-release preparations.<sup>5</sup> The median dose associated with seizures is about 4.4 g.<sup>6</sup> Other reported signs of toxicity include lethargy, tremor, vomiting and agitation.<sup>7</sup> Associated cardiac toxicity includes sinus tachycardia, and massive overdose can cause widening of the QRS complex, ventricular dysrhythmias and cardiovascular collapse.<sup>8</sup> Death can occur. Although reported data are limited, they suggest that less than 0.5% of reported cases of bupropion overdose result in death.<sup>9</sup>

See references, Appendix 1, [www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.131534/-/DC1](http://www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.131534/-/DC1)

**Competing interests:** Nathan Stall is a freelance news writer for and serves on the editorial advisory board of CMAJ.

This article has been peer reviewed.

### Management of bupropion overdose is largely supportive

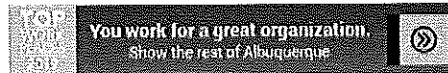
For all cases of bupropion overdose, seizures should be anticipated and a poison control centre consulted. Treatment with activated charcoal should be considered for patients presenting within 60 minutes of ingestion in whom the risk of aspiration is low.<sup>10</sup> Whole bowel irrigation may be considered for patients with large ingestions of sustained-release preparations.<sup>11</sup> Seizures can usually be managed with benzodiazepines alone,<sup>2</sup> but some patients may require barbiturates or propofol.<sup>11</sup> Phenytoin is unlikely to work and should not be administered.<sup>12</sup> In patients with life-threatening cardiovascular toxicity, intravenous lipid emulsion may be helpful, although evidence for its use is very limited.<sup>7</sup>

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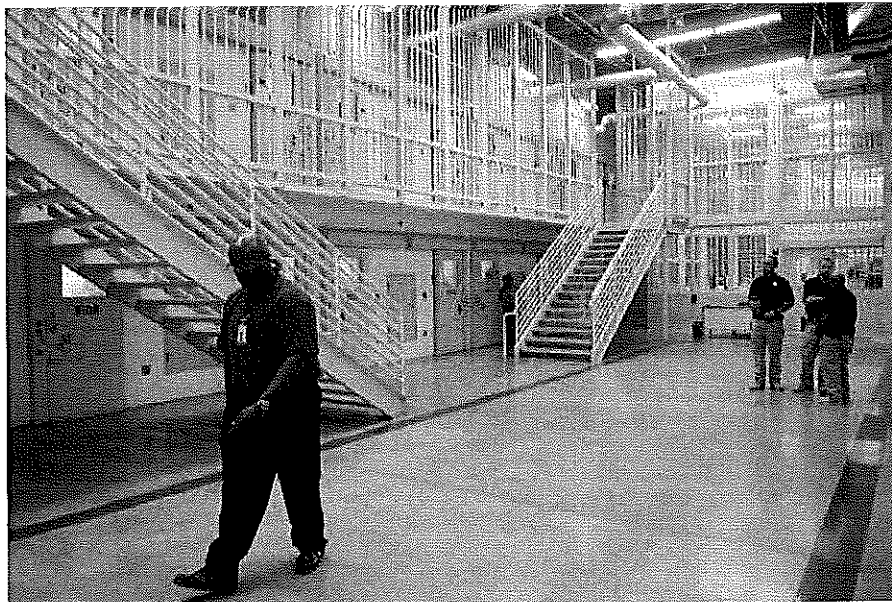


## Getting high in prison

BY THOMAS J. COLE / JOURNAL INVESTIGATIVE REPORTER

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Craig Cole, acting unit manager of the Mental Health Treatment Center at the Central New Mexico Correctional Facility in Los Lunas, makes his way through one of the center's cell pods. The treatment center houses about 100 of the state's most seriously mentally ill prison inmates. (Greg Sorber/Albuquerque Journal)

SANTA FE, N.M. — Erica says she was prescribed the drug Wellbutrin for depression while in county jail and later in state prison. But, she says, she didn't always swallow the drug as she was supposed to; she would sneak it back to her cell and snort it for a high.

"They call it prison coke," says Erica, 28, who served a sentence for drug trafficking and other charges and later landed back in prison for a parole violation.

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Wellbutrin, an antidepressant, is a psychotropic medication and as the number of mentally ill has increased in state prisons, so has the number and percentage of inmates who are prescribed

psychotropic drugs for depression, schizophrenia, bipolar disorder and other conditions.

But many of those medications may be abused for their "high," sleep-causing effects or aid in sexual function. Some can be snorted or injected. The psychotropic medication Seroquel, for example, is known as "baby heroin."

About 33 percent of all inmates in New Mexico prisons – including both men and women – were on psychotropic medications as of April 30, up from 25 percent in 2012 – roughly double what one expert says he would have expected. By comparison, the prescription rate was 10 percent for federal inmates in 2014.

The rate is much higher among female inmates in the state prison system, soaring to about 70 percent at New Mexico's only women's prison, in Grants, as of April 30, according to statistics from the Department of Corrections. For men in the prison system, the rate was much lower, about 30 percent.

Jeffrey Metzner, a University of Colorado psychiatrist who works and conducts research in the field of correctional mental illness, said he would expect to see psychotropic medications prescribed for about 15 percent of male inmates and 30 percent of female inmates.

In response to questions from the **Journal**, the behavioral health unit of the Corrections Department issued a statement saying New Mexico's rate of psychotropic drug prescriptions for inmates is high, particularly for women. The department is taking steps to address the issue, including "establishing a treatment philosophy that leads to lowering the numbers of inmates on psychiatric medications without compromising needed care," the statement said.

### Jail high

#### Psychotropic drugs on rise

Number and percentage of state inmates on psychotropic drugs, by year

**2012** 1,674 25%

**2013** 1,817 28%

**2014** 1,950 30%

**2015** 2,166 33%

*Source: New Mexico Corrections Department*

Psychotropic medications are defined as those drugs capable of affecting the mind, emotions and behavior. Research has shown that inmates will feign illness to obtain some psychotropic medications or buy the drugs or extort them from inmates with prescriptions.

Inmates at the San Juan County Adult Detention Center allegedly drank jailhouse liquor and snorted Wellbutrin before getting into a brawl with guards last December.

Erica, who says she has gotten sober since release from prison, says she snorted Wellbutrin behind bars because it helped with her meth addiction.

"That's how some people get by," she says. "A lot of people in prison are drug addicts. They will do anything for a high."

Other former inmates at the women's prison also described abuse of psychotropic medications, including Wellbutrin and Seroquel. Researchers have found that prescribed drugs, because they are legal and present in prisons, are easier for inmates to obtain than illegal drugs.

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"If the women didn't have that type of drugs, there would be a lot more ... smuggling of drugs into prison," says former Grants inmate Denise Davis Lucero.

### High rates

There is good reason that jails and prisons have been described as America's new asylums for the mentally ill.

New Mexico's only state-owned and -operated psychiatric hospital, in Las Vegas, has 157 behavioral health beds for adults. By comparison, 2,036 inmates in state prisons have received clinical services for chronic mental illness this year, according to the Corrections Department. The state also has a 104-bed unit in Los Lunas for the most seriously mentally ill inmates, including the homicidal.

The number of inmates receiving clinical services for chronic mental illness has grown 29 percent in three years, and there has been a parallel growth in the number of inmates receiving psychotropic medications. A total of 2,166 inmates have received the drugs this year, up 29 percent from 2012.

There were a total of 6,597 female and male state inmates as of April 30, and nearly 71 percent of the women and 28 percent of the men were receiving psychotropic drugs, according to the Corrections Department.

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"Seventy-one percent sounds very high to me," Metzner said of New Mexico's psychotropic drug prescription rate for women inmates. He said one possible explanation is that mental health care services in prisons are understaffed and psychiatrists could be overprescribing because there is limited time to



assess inmates and provide alternative therapy.

A statement by the behavioral health unit of the Corrections Department said, "The overall mental health staffing pattern is good. However, at a few locations, an increased number of mental health staff may be beneficial. Also, it is noted that in rural locations, difficulties are faced with recruiting licensed mental health practitioners."

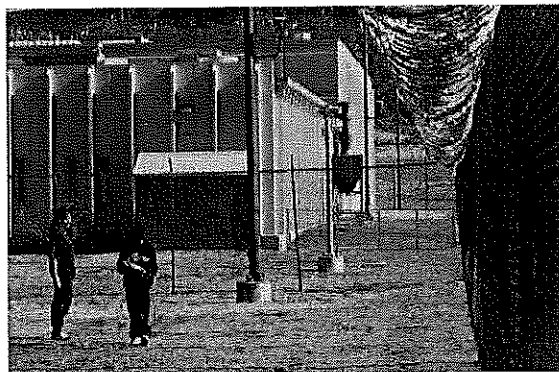
The unit also said in a statement, "Not all patients require psychiatric medications, and counseling is often effective in addressing the mental health/emotional challenges that inmates experience."

The statement said the Corrections Department has begun meeting with its medical contractor to address the challenge of the high rate of inmates on psychotropic medications. The percentage of inmates entering prison on psychotropic drugs and the number of inmates who have completed psychiatric regimens and no longer require psychiatric services will be evaluated, the statement said.

Also, the statement said, the department's next contract for medical services for inmates will require the contractor to provide cutting-edge approaches to address the prescription rate of psychotropic drugs.

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Prisons outside New Mexico have been accused of overprescribing psychotropic medications as a way to keep inmates sedate, but Jerry Roark, director of adult prisons for the Corrections Department, said he doesn't believe that is the case here. "We do not want to use drugs as a security tool," Roark said.



About 70 percent of the inmates at the state's only prison for women are on prescribed psychotropic medications, and former inmates at the Grants facility report prisoner abuse of some of those drugs. Prison inmate Belty Jo Lopez plays catch with son John Anthony Lopez during a visit in 2001. (Roberto E. Rosales/Albuquerque Journal)

### Differing rates

Prescription rates for psychotropic medications differ sharply not only among male and female inmates but also among prisons.

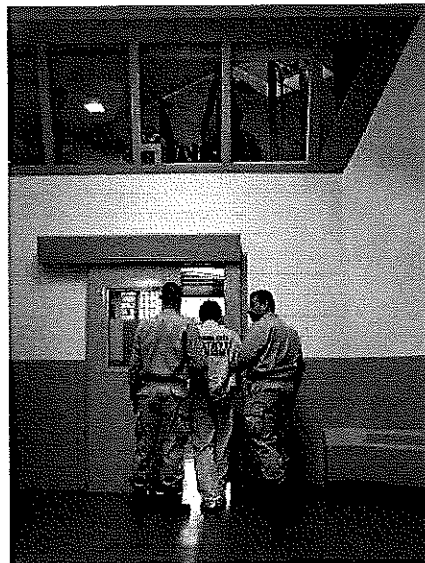
For example, about 18 percent of inmates at the privately run Lea County Correctional Facility in Hobbs were on psychotropic drugs as of April 30, compared to nearly 49 percent at the publicly run Penitentiary of New Mexico in Santa Fe and more than 43 percent at the publicly run Western New Mexico Correctional Facility in Grants.

The psychotropic drug prescription rate for male inmates was 31 percent in all publicly run facilities, compared to 23 percent for men in privately run prisons. (The women's prison is privately run.)

The penitentiary is the state's only super-max prison, and there is a greater level of mental illness among inmates with the highest security risks, said a statement from the behavioral health unit of the Corrections Department. Also, the department tries not to send the most seriously mentally ill inmates to private prisons, the statement said.

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"Overall, the psychiatric prescription variance (among prisons) is a product of the inmate constituency, the level of mental illness and the prescribing practices of individual psychiatrists," the statement said.



Correction Officer Aldon Wade, left, and Sgt. Bobby Varela, right, escort a prisoner out of one of the cell pods in the new maximum security unit at the South Unit at the Penitentiary of New Mexico near Santa Fe. The remodeled unit will house level 5 inmates who are classified as violent and disruptive. This prisoner was used to show the security procedures. (Eddie Moore/Albuquerque Journal)

**Drug abuse**

Under a Corrections Department policy, inmates are barred from having self-carry prescriptions of psychotropic medications, and the drugs must be delivered to inmates in a form that impedes illicit hoarding.

At the women's prison, according to former inmates, psychotropic drugs are dispensed in crushed form and inmates are provided cups of water. However, despite being watched by nursing staff, some prisoners spit the drugs and water back into the cups and take the cups and the substances to their cells, former inmates say. Prisoners let the substances dry, allowing the drugs to then be snorted or injected.

"They were just doing anything they could to get high," says Lucero, the former inmate at Grants.

Bupropion, the generic name for Wellbutrin, has been widely identified in research as a psychotropic medication that is abused by inmates. Outside prison walls, it has been called the "poor man's coke."

Prescription rates for bupropion vary widely across the state's prison system. About 12 percent of inmates at both the women's prison and at the Penitentiary of New Mexico's were prescribed bupropion as of April 30. The rate was less than 2 percent at the Lea County Correctional Facility.

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Another psychotropic medication widely identified as subject to inmate abuse is quetiapine, which is sold under the brand name Seroquel. It's an antipsychotic used to treat schizophrenia, bipolar disorder and depressions, but it's also known among inmates for its sleep-causing effects.

Referred to as "baby heroin," "Suzie Q" and other names, quetiapine can be crushed and snorted. Women inmates who take the drug call it going to "Seroquel Hill," says Erica, the former Grants inmate.

Prescription rates for quetiapine are low across the prison system. As of April 30, only 42 of 6,597 female and male inmates were prescribed the drug. Eleven of the 42 were women.

According to Metzner, the Denver psychiatrist, most states have taken bupropion and quetiapine off their prison formularies, meaning any prescriptions of the drugs by psychiatrists must be reviewed and approved by other medical personnel.

New Mexico has taken quetiapine but not bupropion off its formulary. "However, the potential for abuse of (bupropion) is well known and administration procedures are strict," according to the statement from the behavioral health unit of the Corrections Department.

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